

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

MITSUBISHI

Q06HCPU

MELSEC-Q HIGH-PERFORMANCE CPU MODULE

Used with the applicable MELSEC-Q configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Official manufacturer documentation applicable to Q06HCPU



High Performance QCPU

Item		Q02CPU	Q02HCPU	Q06HCPU	Q12HCPU	Q25HCPU
Control method		Sequence program control method				
I/O control mode		Refresh				
Program language (sequence control language)		<ul style="list-style-type: none"> • Relay symbol language (ladder) • Logic symbolic language (list) • MELSAP3 (SFC), MELSAP-L • Function block • Structured text (ST) 				
Peripheral connection port	USB	—		●		
	RS-232			●		
Memory card interface		● (SRAM card, Flash card, ATA card)				
Processing speed*1	LD instruction	79ns		34ns		
	MOV instruction	237ns		102ns		
	PC MIX value (instruction/μs)*2	4.4		10.3		
	Floating point addition	1.8μs		0.78μs		
Total number of instructions*3		725				
Floating point instruction		●				
Character string processing instruction		●				
PID instruction		●				
Special function instruction (Trigonometric function, square root, exponential operation, etc.)		●				
Constant scan (Function for keeping regular scan time)		0.5 to 2000 ms (setting available in units of 0.5 ms)				
Program capacity		28 K steps		60 K steps	124 K steps	252 K steps
Number of I/O device points [X/Y]		8192 points				
Number of I/O points [X/Y]		4096 points				
Internal relay [M]*4		8192 points				
Latch relay [L]*4		8192 points				
Link relay [B]*4		8192 points				
Timer [T]*4		2048 points				
Retentive timer [ST]*4		0 points				
Counter [C]*4		1024 points				
Data register [D]*4		12288 points				
Link register [W]*4		8192 points				
Annunciator [F]*4		2048 points				
Edge relay [V]*4		2048 points				
Link special relay [SB]		2048 points				
Link special register [SW]		2048 points				
File register [R, ZR]		32768 points*5	65536 points*5		131072 points*5	
Step relay [S]		8192 points				
Index register [Z]		16 points				
Pointer [P]		4096 points				
Interrupt pointer [I]		256 points				
Special relay [SM]		2048 points				
Special register [SD]		2048 points				
Function input [FX]		16 points				
Function output [FY]		16 points				
Function register [FD]		5 points				
Local device		●				
Device initial values		●				

*1: The processing speed is the same even when the device is indexed.

*2: The PC MIX value is the average number of instructions such as the basic and data processing instructions executed in 1μs. A larger value indicates a higher processing speed.

*3: Intelligent function module dedicated instructions are not included.

*4: Indicates the number of points in the default state. This can be changed with the parameter.

*5: Indicates the number of points when the built-in memory (standard RAM) is used. Capacity can be expanded by using an SRAM card or a Flash card.
(Writing from a program is not possible with a Flash card.)With an SRAM card, up to 1041408 points can be used.



CPU

[Legend] **DB** : Double brand product **NEW** : Recently released product **SOON** : Product available soon

Type	Model	Outline
Basic model QCPU	Q00JCPU	No. of I/O points: 256 points, no. of I/O device points: 2048 points, program capacity: 8 K steps, basic operation processing speed (LD instruction): 0.2 μs, program memory capacity: 58 KB, peripheral connection ports: RS232, no memory card I/F, 5-slot base, with 100 to 240 V AC input / 5 V DC/3 A output power supply
	Q00CPU	No. of I/O points: 1024 points, no. of I/O device points: 2048 points, program capacity: 8 K steps, basic operation processing speed (LD instruction): 0.16 μs, program memory capacity: 94 KB, peripheral connection ports: RS232, no memory card I/F
	Q01CPU	No. of I/O points: 1024 points, no. of I/O device points: 2048 points, program capacity: 14 K steps, basic operation processing speed (LD instruction): 0.1 μs, program memory capacity: 94 KB, peripheral connection ports: RS232, no memory card I/F
High Performance model QCPU	Q02CPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 28 K steps, basic operation processing speed (LD instruction): 0.079 μs, program memory capacity: 112 KB, peripheral connection ports: RS232, with memory card I/F
	Q02HCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 28 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 112 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q06HCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 60 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 240 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q12HCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 124 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 496 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q25HCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 252 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 1008 KB, peripheral connection ports: USB and RS232, with memory card I/F
Process CPU	Q02PHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 28 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 112 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q06PHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 60 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 240 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q12PHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 124 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 496 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q25PHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 252 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 1008 KB, peripheral connection ports: USB and RS232, with memory card I/F
Redundant CPU	Q12PRHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 124 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 496 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q25PRHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 252 K steps, basic operation processing speed (LD instruction): 0.034μs, program memory capacity: 1008 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Tracking cable	QC10TR Tracking cable 1 m
		QC30TR Tracking cable 3 m
C Controller CPU	Q24DHCCPU-V	No. of I/O points: 4096 points, endian format: little endian, removable storage: SD memory card, OS:VxWorks® Version 6.8.1
	Q24DHCCPU-LS NEW	No. of I/O points: 4096 points, endian format: little endian, removable storage: SD memory card, OS:No pre-installed operating system (Operating system installed by user)
	Q12DCCPU-V	No. of I/O points: 4096 points, endian format: little endian, removable storage: CompactFlash card, OS:VxWorks® Version 6.4
	Q06CCPU-V	No. of I/O points: 4096 points, endian format: little endian, removable storage: CompactFlash card, OS:VxWorks® Version 5.4
	Q12DCCPU-CBL*1*2	RS-232 connection converter cable (custom mini-DIN to 9-pin D-sub connector)
	L1MEM-2GBSD*1*3	SD memory card, capacity: 2 GB
	L1MEM-4GBSD*1*3	SDHC memory card, capacity: 4 GB
	GT05-MEM-128MC*4	CompactFlash card, capacity: 128 MB
	GT05-MEM-256MC*4	CompactFlash card, capacity: 256 MB
	QD81MEM-512MBC*2*5	CompactFlash card, capacity: 512 MB
	QD81MEM-1GB*2*5	CompactFlash card, capacity: 1 GB
	QD81MEM-2GB*2	CompactFlash card, capacity: 2 GB
	QD81MEM-4GB*2	CompactFlash card, capacity: 4 GB
	QD81MEM-8GB*2	CompactFlash card, capacity: 8 GB

*1: For use with Q24DHCCPU.

*2: For use with Q12DCCPU-V.

*3: Mitsubishi Electric shall not guarantee the operation of any non-Mitsubishi Electric products.

*4: Can only be used in combination with Multi-CPU high speed base.

*5: For use with Q06CCPU-V.